#2. 도함수 구하기 $= \frac{dy}{dx}$ 구하기

(1) $y = 2x^5 - x^3 + 2x + 1$.

$\Rightarrow y' = 10x^4 - 3x^2 + 2$

(2) $y = (x^2+1)(x^2+2x+3)$

* $y = f(x)\,g(x)$

$y' = f'(x)\,g(x) + f(x)\,g'(x)$

$\Rightarrow y' = (2x)(x^2+2x+3) + (x^2+1)(2x+2)$

(3) $y = \frac{5x-1}{2x+1}$

* $y = \frac{f(x)}{g(x)}$

$y' = \frac{f'(x)g(x) - f(x)g'(x)}{(g(x))^2}$

$y' = \frac{5(2x+1) - (5x-1)2}{(2x+1)^2}$

$= \frac{10x+5-10x+2}{(2x+1)^2} = \frac{7}{(2x+1)^2}$